

Amend claims 8, 10-12, 15, 16, 29, and 30 as follows.

C1 8. (Twice Amended) A purified and isolated DNA which encodes an AGE-1 polypeptide having PI 3-kinase activity, said polypeptide having at least 95% amino acid sequence identity to the full length polypeptide of Figure 6 (SEQ ID NO: 1) and comprising a p85-binding domain and a lipid kinase domain.

10. (Amended) A vector comprising the purified and isolated AGE-1 DNA of claim 8.

C2 11. (Amended) A cell comprising the purified and isolated AGE-1 DNA of claim 8.

Sub 1 12. (Amended) A method of producing a recombinant AGE-1 polypeptide, said method comprising the steps of:

- (a) providing a cell transformed with the DNA of claim 8 encoding an AGE-1 polypeptide positioned for expression in the cell;
- (b) culturing the transformed cell under conditions for expressing the DNA; and
- (c) isolating the recombinant AGE-1 polypeptide.

C3 Sub 2 15. (Amended) A method of identifying an AGE-1 modulatory compound that is

capable of decreasing the expression of an AGE-1 gene, said method comprising the steps of:

- (a) providing a cell expressing the AGE-1 DNA of claim 8;
- (b) contacting said cell with a candidate compound; and
- (c) measuring AGE-1 gene expression in said cell, a decrease in AGE-1 gene expression in said cell following contact with said candidate compound, relative to an untreated cell, identifying said candidate compound as a compound that is capable of decreasing AGE-1 gene expression.

C³ 16. (Twice Amended) A method of identifying an AGE-1 modulatory compound that is capable of decreasing AGE-1 PI 3-kinase activity, said method comprising the steps of:

- (a) providing a cell expressing an AGE-1 polypeptide of claim 8;
- (b) contacting the cell with a candidate compound; and
- (c) measuring the PI 3-kinase activity of said cell, a decrease in AGE-1 PI 3-kinase activity of said cell following contact with the candidate compound, relative to an untreated cell, identifying said candidate compound as a compound that is capable of decreasing AGE-1 PI 3-kinase activity.

C⁴ 19. (Amended) The method of claim 15 or 16, wherein said method is carried out

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in a nematode.

Sub D3 29. (Amended) The purified and isolated DNA of claim 8, wherein said polypeptide comprises at least 50% of the following amino acids of Figure 6 (SEQ ID NO: 1): amino acids Gly-32, Leu-73, His-78, Phe-81, Glu-109, Phe-114, Leu-123, Leu-125, Phe-129, Lys-181, Ser-208, Lys-211, Arg-321, Leu-325, Leu-351, Ser-355, Met-373, Leu-381, Leu-393, Thr-432, Tyr-451, Glu-475, Pro-507, Ile-514, Gly-518, Glu-530, Val-538, Leu-582, Tyr-606, Pro-643, Phe-665, Leu-744, Leu-745, Arg-762, Leu-789, Arg-794, Ala-827, Arg-829, Trp-835, Ser-842, Asn-905, Gly-917, Asp-975, Ile-990, Asp-1006, His-1020, Lys-1104, Thr-1105, Gly-1130, Phe-1140, and Lys-1144.

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30. (Amended) The purified and isolated DNA of claim 29, wherein said polypeptide comprises an identical amino acid in the equivalent position to Ala-827 of Figure 6 (SEQ ID NO: 1).

REMARKS

Applicants' invention focuses on purified nucleic acid sequences encoding AGE-1 polypeptides and methods that exploit these AGE-1 nucleic acids for the identification of compounds that decrease AGE-1 expression or activity.